U.S. Department of Transportation

United States Coast Guard

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13 December 1994

The Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Ref: CC Docket No. 94-102, Revision of the Commission's Rules to ensure compatibility with enhanced 911 emergency calling systems

Dear Mr. Secretary:

In accordance with Section 1.419 of the FCC Rules, enclosed are an original and four (4) copies of United States Coast Guard Comments in the above-captioned proceeding.

Sincerely,

J. D. HERSEY Jr.
Chief, Maritime Radio and Spectrum Management
Telecommunication Management Division
By Direction

Enclosure: Comments of the United States Coast Guard

Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In the Matter of	)	
	)	CC Docket No. 94-102
Revision of the Commission's Rules	)	
to ensure compatibility with	)	RM-8143
enhanced 911 emergency calling	)	
systems	)	

COMMENTS OF THE UNITED STATES COAST GUARD

The United States Coast Guard (Coast Guard) respectfully submits these Comments in response to the Notice of Proposed Rulemaking (Notice) in the above-captioned proceeding[1].

Introduction

1. The Coast Guard operates 56 Centers throughout the United States, plus similar centers outside the country, to respond to maritime emergencies. These centers maintain emergency telephone numbers to allow people to report overdue vessels, observed boaters in distress, or other emergencies. During fiscal year 1993, the Coast Guard assisted 117,156 people and saved 5,378 lives. We received over 40,000 emergency calls over a variety of different telecommunications systems. The property assisted was valued at 2.5 billion dollars. In fiscal year 1992, the Coast Guard received 706 suspected hoax calls, 15 of which were confirmed; those confirmed calls cost the taxpayer $2,618,125.

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[1] The Coast Guard also filed comments in CC Dockets 91-281 and 92-166, requesting that a caller ID capability be provided by any mobile telephone system capable of making calls to a public agency's emergency telephone line.

2. Mariners use a variety of telecommunications systems for sending emergency calls to the Coast Guard. Most such calls are over government-operated systems, such as the VHF National Distress System, the COSPAS-SARSAT satellite system, or systems recognized by the International Maritime Organization's Global Maritime Distress & Safety System (GMDSS). However a large and growing number of emergency calls are received over cellular telephone systems[2]. As other wireless systems become available, we expect a large number of emergency calls to be sent over those systems. In recognition of the public demand for such a capability, Coast Guard regulations (46 CFR 28.245(c) and (d)) allow commercial fishing industry vessels to carry cellular or unspecified satellite communications equipment to meet Congress' mandate that these vessels carry radiocommunications equipment[3].

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[2] In fact, many carriers have added a maritime safety feature, whereby calls initiated by "*CG" are automatically routed to the nearest appropriate Coast Guard Rescue Coordination Center. This "*CG" service has been well advertised in the maritime community and its use is common.

[3] See Commercial Fishing Industry Vessel Safety Act (46 USC Sections 4501-08). Section 4502, Safety Standards, provides that:

(a) The Secretary shall prescribe regulations which require each vessel to which this chapter applies shall be equipped with ...

(7) alerting and locating equipment ... on vessels that operate on the high seas...

(b) (1) In addition to the requirements of subsection (a) of this section, the Secretary shall prescribe regulations requiring the installation, maintenance, and use of the equipment in paragraph (2) of this subsection for documented vessels to which this chapter applies that...

It is essential that either all of these wireless systems provide a reliable and efficient means of alerting and communicating with a rescue coordination center in an emergency, or that those incapable of providing such a service clearly indicate that limitation to its customers.

3. Although 911 is important to us, many Coast Guard search and rescue coordination centers are not served by 911, and having areas of responsibility not consistent with local 911 areas of responsibility, there is no simple way to process maritime emergencies through 911 without making special arrangements with every local 911 service provider. Our records indicate that during fiscal year 1993 we processed only 20 emergency calls through 911. However, we received 15,512 emergency calls using non-maritime calling systems, directly to the rescue coordination center, primarily through the public switched telephone network. For example, all of our voice emergency calls from the GMDSS-recognized Inmarsat satellite system are received this way. Because of our unique responsibility to accept emergency calls

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[3] Cont. (2) The equipment to be required is as follows:

(A) alerting and locating equipment...

(D) radiocommunications equipment sufficient to effectively communicate with land-based search and rescue facilities; ... and ...

(G) other equipment required to minimize the risk of injury to the crew during vessel operations, if the Secretary determines that a risk of serious injury can be eliminated or mitigated by that equipment.

The Commandant of the Coast Guard prescribes these regulations. 46 CFR 28.10.

from outside the local 911 area, from any mobile or mobile satellite service, and from out of state, we must rely on emergency numbers over public switched lines. We cannot rely exclusively on 911 to respond to all maritime emergency telephone calls; doing so would cause confusion, delays, and in certain cases no connectivity at all.

4. With the increasing use of cellular mobile telephones by mariners for Coast Guard emergency assistance and the potential proliferation of other wireless mobile systems that will be used by mariners for making emergency calls, Coast Guard search and rescue coordination centers must rely on a mobile system's capability to provide caller ID information to enable it to identify and locate callers needing assistance, and to assist in the prosecution of hoax callers.

Caller ID and Use of Signaling System 7 (SS7) Technology

5. In its Final Rule concerning Licensing Policies and Procedures, Satellite Communications (CC Docket 92-166), the Commission, in referring to recommendations that "the Commission require caller ID, standardized position information and automatic routing for distress and safety communications or other distress communications," noted it would "address those issues in our rulemaking proceeding on enhanced 9-1-1 capability" (Final Rule paragraph 199). Therefore, it is apparent that the instant proceeding is competent to address the use of caller ID in regard

6. At a minimum, in order to accomplish Coast Guard rescue missions without delay and to prosecute hoax calls when they do occur, any wireless system should be capable of providing the following information to the Public Service Answering Point (PSAP) or Local Exchange Carrier in the delivery of emergency calls:

Location of the call's origin

Mobile transmitter subscriber's name

Mobile transmitter subscriber's call back number

Priority of the call

Routing information

7. At paragraph 53 of the Notice the Commission proposes to require common channel signaling capabilities be implemented within three years after adoption of the rules in this proceeding to ensure that the information and features currently available from wireline calls are also available from mobile calls. We strongly support the Commission's proposal to require all mobile systems employ these capabilities and we believe that SS7 technology would satisfy the requirement for transporting caller ID information to the PSAP or local exchange carrier.

8. We understand[4] that transmission of the SS7 protocol by cellular telephone systems is technically feasible and will be

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[4] Internet E-Mail from Bellcore NVC 2Z-220, sent to USCG on September 21, 1994.

implemented in cellular systems as soon as the Mobile Traffic Switching Offices (MTSO) convert over from Medium Frequency (MF) trunks. However, delays in implementing this technology in cellular telephone systems may be attributed to the business arrangements between local exchange carriers, cellular access providers and interexchange carriers over who pays who for carrying the caller information. We also understand[5] that similar technical requirements for other Wireless Access Communications Services (WACS) are currently under development.

9. In light of the fact that cellular telephone mobile systems have been in operation for some time and other wireless mobile systems are still in the near-deployment stage, we agree that common channel signaling capabilities such as SS7, or a modified form thereof, should be implemented within three years after adoption of the rules in this proceeding.

Privacy Protection Requirements

10. The Commission requests comments on the necessity for imposing privacy requirements on caller information transmitted to local exchange carriers and PSAPs in the delivery of emergency calls. We filed comments in CC Docket No. 91-281 (Caller ID proceeding) requesting that privacy protection requirements not apply to calls made to Coast Guard emergency numbers. The Commission's Report and Order adopted the recommendations of the Coast Guard and other emergency service providers and did not

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[5] Id.

apply privacy protection requirements to calls made to emergency service providers. We continue to believe that privacy protection requirements should not apply to emergency calls made over any wireline or wireless communications system.

11. This is important for two reasons. First, Coast Guard rescue coordination centers must know the identity of a person in a maritime emergency situation or reporting a maritime emergency, so that we can respond quickly, and call back that person if communications are lost. Second, we receive a growing number of hoax calls by telephone, each of which costs the taxpayer in reduced availability of Coast Guard resources for responding to actual distress calls, and thousands of dollars in fuel for unnecessary use of helicopters, boats, and other resources. We will depend increasingly on the capability to identify the hoax caller for prosecution purposes and discourage others from making such calls.

12. There would be no advantage to the FCC in protecting wireless emergency calls with the Privacy Act, by allowing the blocking of caller ID to emergency numbers, because, even if courts determined that the Privacy Act is generally applicable in this matter, emergency conditions form an exemption to the Privacy Act. The relevant provision is provided in 5 U.S.C. Section 552a(b)(8)[6]. The Office of Management and Budget

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[6] (b) Conditions of disclosure

guidance indicates that the exemption should apply beyond merely the individual in peril (OMB Guidelines, 40 Fed. Reg. 28948, 28955 (1975)). However, the FCC should be assured that such disclosures would be limited in SAR situations to true emergencies, "situations involving life and death" (Deplanche v. Califano, 549 F. Supp. 685, 703-704, W.D. Mich. 1982). SAR represents a situation "where consent cannot be obtained because of time and distance and instant action is required" (H.R. Rep. No. 1416, 93rd Cong., 2d Sess. 15 (1974); S. Rep. No. 1183, 93rd Cong., 2d Sess. 20 (1974)). The Commission should be assured that the "[d]iscretion authorized here is intended to be used rarely" (S. Rep. No. 1183, supra). Insofar as protecting hoax distress reports, there is no advantage to the FCC protecting emergency calls with the Privacy Act because law enforcement records, like those of emergency situations, also fall within an exemption to the Privacy Act. The relevant provision is provided in 5 U.S.C Section 552a(b)(7)[7]. The "head of agency" requirement

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[6] Cont. No agency shall disclose any record which is contained in a system of records by any means of comunication to any person, or to another agency, except pursuant to a written request by, or with the prior consent of, the individual to whom the record pertains, unless the record would be...

(8) to a person pursuant to a showing of compelling circumstances affecting the health or safety of an individual if upon such disclosure notification is transmitted to the last known address of such individual.

[7] (b) Conditions of disclosure
No agency shall disclose any record which is contained in a system of records by any means of communication to any person, or to another agency, except pursuant to a written request by, or with the prior consent of, the individual to whom the record pertains, unless the record would be...

may be delegated as far as a "section chief" level (Doe v. DiGenova, 779 F.2d 74, 85 (DC Cir. 1985); OMB Guidelines, supra). Memoranda of Understanding between the Coast Guard and FCC are widely used in practice to identify and prosecute hoax callers.

Applicability of Proposed Compatibility Requirements

13. The Commission requests comment on which services should be covered by its proposed rules. We agree with the Commission that the majority of two-way systems in use today provide only voice communications; however, many of the new-generation wireless, two-way communications systems soon to be deployed will provide a data-only service (e.g. small Low Earth Orbiting satellites), and others will provide both voice and data. We understand that proponents of some of the data-only systems intend to provide emergency calling features. Therefore, we believe that the proposed compatibility requirements should apply to all two-way wireless voice and data systems, which fall under the classification of Commercial Mobile Radio Systems (CMRS), that intend to incorporate emergency calling features in their user terminals.

14. Two-way wireless communication systems falling under the classification of Commercial Mobile Radio System (CMRS), such as

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[7] Cont. (7) to another agency or instrumentality of any governmental jurisdiction within or under the control of the United States for a civil or criminal law enforcement activity is authorized by law, and if the head of the agency or instrumentality has made a written request to the agency which maintains the record specifying the particular portion desired and the law enforcement activity for which the record is sought.

those listed below, should be subject to the FCC's proposed compatibility requirements:

Cellular Radio Telephone Systems

Personal Communications Systems

Mobile Satellite Systems

-Small and big Low Earth Orbiting satellites

-Medium Earth Orbiting satellites

-AMSC

- and other future providers of similar two-way communications satellite systems

Future Public Land Mobile Telephone Systems (FPLMTS)

15. Provisions do not yet exist for automatically forwarding emergency calls from store-and-forward data systems, such as the small LEO satellite systems, to a PSAP or rescue coordination center. Until these problems are resolved, we propose that such carriers provide persons who will ensure that appropriate PSAPs or rescue coordination centers are notified of emergency messages when they are received by the carrier. In implementing the Global Maritime Distress and Safety System, the International Maritime Organization prepared "Criteria for Use when Providing Inmarsat Shore-based Facilities" for use in the GMDSS to address reliability of delivering emergency messages over store-and-forward satellite systems. We propose these criteria, attached hereto as Enclosure 1, be considered in this proceeding.

Wireless Systems That Provide International Access

16. We note that some of the systems we identified above will provide international access, and therefore should be subject to compatibility requirements similar to those proposed in this Notice for domestic providers. A U.S. mariner, for example, navigating outside of U.S. waters within a known coverage area may attempt to use his mobile radio for emergency calling to a foreign emergency service provider and may be unable to get assistance immediately because of the nonexistence or lack of international compatibility standards. Similarly a foreign mariner using a wireless system licensed by a foreign government may have the same difficulty in U.S. waters.

17. We request that the Commission closely coordinate the adoption of its compatibility requirements and standards with International Regulatory bodies, such as the International Telecommunications Union Sector for Radiocommunications, Study Group 8, as well as the ITU Sector for Telecommunications, to ensure the adoption of standards that will allow these wireless systems to transmit caller ID, identification, location, priority, and routing information that will be decoded by emergency service providers in this and other countries.

Wireless Service Provider Coverage Areas

18. The Notice does not address the issue of coverage as it relates to the geographic areas where a wireless service provider would make its emergency features available. This is a very

important issue for the Coast Guard, especially in the case of a mobile satellite system providing service to a portion of, or all, of an ocean area. Similarly, a cellular radio telephone service provider may only guarantee coverage several miles from shore. For example, neither our inspectors nor mariners using non-maritime wireless communications equipment complying with the requirements of 46 CFR 28.245 have any definitive way of knowing if these systems will work in the vessel's intended operating area. Some of the LEO proponents, for example, may not intend to provide service coverage to certain ocean areas for economic reasons.

19. We propose that the service provider make available to its customers and the FCC the geographical areas over which it intends to provide emergency calling features. Additionally, service providers should similarly report all changes in its geographical service areas, whether temporary or permanent. This information is essential to the mariner who travels into an ocean area not covered by the service he subscribed to, and would caution him to use an alternate means of emergency calling.

Basic Connectivity

20. Users of existing satellite communications systems, such as Inmarsat land mobile systems, have no means of contacting a PSAP, even by dialing 911, except by going through a service provider operator at the land earth station. If the provider's land earth station were automated and an operator were not available on a 24

hour basis, users would have no means of reaching a PSAP in an emergency. We suspect this problem would exist with any planned satellite system. We believe it to be absolutely essential that every mobile satellite system provide a means of reaching a PSAP in an emergency on a 24 hour basis.

Labeling

21. We believe that any consumer wireless equipment that is not capable of providing an emergency calling function should be labeled stating that the equipment cannot be used for emergency purposes.

Availability

22. The FCC proposed that "a user have the ability to reach emergency services from any service initialized mobile radio handset in a home service area or a subscribed-to roamed service area by dialing only 911" (Notice, paragraph 41). We concur, and recommend such service be available in any compatible service area. However we understand that other emergency calling codes now in use, such as "*CG" described in paragraph 2 above, cannot always be used outside a home service area. We recommend that where "*CG" is recognized as an emergency calling code, any compatible service initialized mobile radio handset be allowed to use it. If limitations are necessary, those limitations should be well advertised and labeled. A user in maritime emergency should not be left to discover that "*CG" doesn't work because a roaming service was suspended or because he or she subscribed to the wrong carrier.

Summary

23. It is essential that either all two-way wireless voice and data systems falling under the classification of Commercial Mobile Radio Systems (CMRS) provide a reliable and efficient means of calling and communicating with a rescue coordination center in an emergency, or that those incapable of providing such a service clearly indicate that limitation to its customers.

24. This proceeding is competent to address the use of caller ID in regard to distress and safety communications over wireless systems. Wireless services capable of accessing the public switched telephone network should provide caller ID connectivity to wireline services, at least for emergency calls to public safety agencies.

25. Any wireless system should be capable of providing the following information to the PSAP or local exchange carrier in the delivery of emergency calls:

Location of the call's origin
Mobile transmitter subscriber's name
Mobile transmitter subscriber's call back number
Priority of the call
Routing information

26. We agree that common channel signaling capabilities such as SS7, or a modified form thereof, should be implemented within three years after adoption of the rules in this proceeding.

27. We believe that privacy protection requirements should not apply to emergency calls made over any wireline or wireless communications system.

28. The proposed compatibility requirements should apply to all two-way wireless voice and data systems, which fall under the classification of Commercial Mobile Radio Systems (CMRS), that intend to incorporate emergency calling features in their user terminals.

29. We propose that carriers providing store-and-forward services provide persons who will ensure that appropriate PSAPs or rescue centers are notified of emergency messages when they are received by the carrier, and that the attached IMO criteria be considered in addressing reliability of delivering emergency messages over store-and-forward satellite systems.

30. We request that the Commission closely coordinate the adoption of its compatibility requirements and standards with International Regulatory bodies.

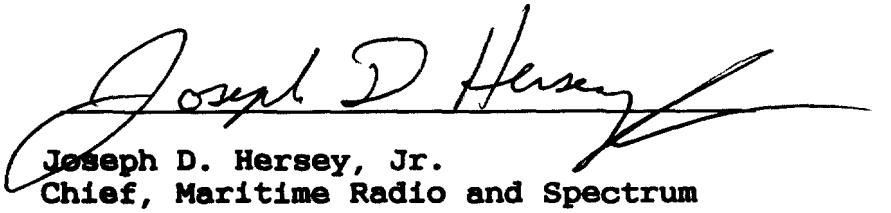
31. We propose that the service provider make available to its customers and the FCC the geographical areas over which it intends to provide emergency calling features. Additionally, service providers should similarly report all changes in its geographical service areas, whether temporary or permanent.

32. We believe it to be absolutely essential that every mobile satellite system provide a means of reaching a PSAP in an emergency on a 24 hour basis.

33. We recommend that a user have the ability to reach 911 and "*CG" emergency services from any service initialized mobile radio handset in any compatible service area.

34. We believe that any consumer wireless equipment that is not capable of providing an emergency calling function should be labeled stating that the equipment cannot be used for emergency purposes.

Respectfully Submitted,



Joseph D. Hersey, Jr.
Chief, Maritime Radio and Spectrum Management
Telecommunications Management Division
By Direction of the Commandant

Commandant (G-TTM)
United States Coast Guard
Washington, D.C. 20593-0001

Enclosure: IMO Criteria for Use when Providing Inmarsat Shore- based Facilities

ENCLOSURE(1)

ANNEX 5

CRITERIA FOR USE WHEN PROVIDING INMARSAT SHORE-BASED FACILITIES FOR USE IN THE GMDSS

1 Governments desiring to provide an INMARSAT coast earth station facility for use in the GMDSS should notify the Organization of their intention so that the Organization can maintain and circulate a complete list of stations providing distress watch. Governments should ensure that such shore-based facilities are provided in accordance with the criteria contained in appendix.

2 Governments, individually or in co-operation with other Governments within a specific SAR region, desiring to provide INMARSAT coast earth station facilities serving, either wholly or in part, particular sea areas, should notify the Organization as to the extent of continuous coverage and the extent of coverage from shore. This information should be determined by Governments in accordance with the Criteria for Establishing GMDSS Sea Areas contained in annex 3 to the present resolution.

3 The Organization should maintain in the GMDSS Master Plan details of all sea areas covered by INMARSAT coast earth station facilities and should periodically circulate an updated copy of the description of these sea areas to Governments.

4 Governments having coast earth stations participating in the GMDSS should ensure that those stations conform with these criteria specified in appendix and ensure that only those stations are listed in the GMDSS Master Plan.

APPENDIX TO ANNEX 5

1 BASIC PRINCIPLES FOR ESTABLISHING INMARSAT COAST EARTH STATIONS FOR GMDSS SERVICES

1.1 The selection of INMARSAT coast earth stations for GMDSS services should be based on the following principle:

each ocean area requiring guard should have a minimum of two coast earth stations to provide the required cover for each system.

1.2 The minimum number of coast earth stations indicated in 1.1 for any given ocean area may need to be adjusted in future in order to provide full back-up in the event of operational failure.

2 CRITERIA FOR INMARSAT COAST EARTH STATIONS

2.1 INMARSAT coast earth stations participating in the GMDSS should:

.1 meet the INMARSAT Technical Requirements confirmed by INMARSAT type acceptance and commissioning tests;

.2 operate in compliance with the INMARSAT system operating procedures (SOP) for distress alerting and distress communications;

.3 have a registered associated RCC and have reliable communications by telephone, telex, or other means;

.4 be in continuous operation;

.5 support the following GMDSS communications functions:

.5.1 ship-to-RCC distress alerting preferably by a dedicated link;

.5.2 RCC-to-ship(s) distress alert relay preferably by a dedicated link;

.5.3 RCC-to-RCC co-ordinating communications by using SES terminals;

.5.4 transmit maritime safety information (INMARSAT-C only); and

.5.5 receiving maritime safety information.

2.2 Stations with store-and-forward systems should:

2.2.1 make an initial attempt to deliver a ship-to-shore or shore-to-ship message within 60 seconds for any distress alert or traffic, and 10 minutes for all other safety messages, from the time the receiving station receives the message;

2.2.2 generate the notification of non-delivery immediately once the message is considered non-deliverable;

2.2.3 activate an aural/visual alarm to alert a designated responsible person if the distress traffic cannot be forwarded within the criteria of paragraph 2.2.1.

ENCLOSURE(1)

2.3 Stations with circuit switching systems should immediately attempt to deliver a ship-to-shore or shore-to-ship distress alerts or traffic.

2.4 Stations should:

2.4.1 be capable of recognizing distress alerts in the ship-to-shore direction;

2.4.2 be capable of recognizing the following categories of priorities in both the ship-to-shore and shore*-to-ship direction:

Maritime distress,

All other maritime (urgency, safety and routine);

2.4.3 ensure the avoidance of degradation of, or obstructions to, urgency and safety maritime communications by employing four levels of priority in the shore-to-ship and ship-to-shore directions, by differentiating non-maritime from maritime communications or by other means established by INMARSAT.

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* Registered GMDSS service provider.

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